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NOTICE OF ALLOWANCE AND FEE(S) DUE

28554

7590

04/27/2009

Vierra Magen Marcus & DeNiro LLP
575 Market Street, Suite 2500
San Francisco, CA 94105

EXAMINER

CHEN, QING

ART UNIT

PAPER NUMBER

2191

DATE MAILED: 04/27/2009

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/720,726	11/24/2003	Adam G. Wolff	LZLO-0100G/US0	2756

TITLE OF INVENTION: SYSTEM FOR OPTIMIZING APPLICATION START-UP

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	\$755	\$300	\$0	\$1055	07/27/2009

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. **PROSECUTION ON THE MERITS IS CLOSED.** THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN **THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE** OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. **THIS STATUTORY PERIOD CANNOT BE EXTENDED.** SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail **Mail Stop ISSUE FEE**
Commissioner for Patents
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INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

28554 7590 04/27/2009
Vierra Magen Marcus & DeNiro LLP
575 Market Street, Suite 2500
San Francisco, CA 94105

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/720,726 11/24/2003

Adam G. Wolff

LZLO-01006US0

2756

TITLE OF INVENTION: SYSTEM FOR OPTIMIZING APPLICATION START-UP

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nonprovisional	YES	\$755	\$300	\$0	\$1055	07/27/2009

EXAMINER	ART UNIT	CLASS-SUBCLASS
CHEN, QING	2191	717-154000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB-122) attached.
☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB-47; Rev 03-02 or more recent) attached. Use of a **Customer Number is required.**

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, 1 _____
(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 _____
3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee
☐ Publication Fee (No small entity discount permitted)
☐ Advance Order - # of Copies _____

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.
☐ Payment by credit card. Form PTO-2038 is attached.
☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____ Date _____
Typed or printed name _____ Registration No. _____

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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10/720,726	11/24/2003	Adam G. Wolff	LZLO-01006US0	2756
28554	7590	04/27/2009	EXAMINER	
Vierra Magen Marcus & DeNiro LLP 575 Market Street, Suite 2500 San Francisco, CA 94105			CHEN, QING	
			ART UNIT	PAPER NUMBER

2191

DATE MAILED: 04/27/2009

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 707 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 707 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

Notice of Allowability**Application No.**

10/720,726

Examiner

Qing Chen

Applicant(s)

WOLFF ET AL.

Art Unit

2191

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed on February 11, 2009.
2. ☒ The allowed claim(s) is/are 1-15, 17, 19-31, 33-35, 38-56 and 62-65, renumbered as 1-55.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
(a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
(b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

DETAILED ACTION

1. This Office action is in response to the amendment filed on February 11, 2009.
2. **Claims 1-15, 17, 19-31, 33-35, 38-56, and 62-65** are pending.
3. **Claims 1-3, 6, 7, 11, 20, 21, 27, 28, 33, 35, 38-41, 44, 45, 47, 52, 62, and 63** have been amended.
4. **Claims 16, 18, 32, 36, 37, and 57-61** have been canceled.
5. **Claims 1-15, 17, 19-31, 33-35, 38-56, and 62-65** are allowed, renumbered as 1-55.
6. The objection to the specification is withdrawn in view of Applicant's amendments to the specification or Examiner's amendments to the specification.
7. The objections to Claims 20-35, 38-57, and 62-65 are withdrawn in view of Applicant's amendments to the claims or cancellation of the claims or Examiner's amendments to the claims.
8. The 35 U.S.C. § 112, second paragraph, rejections of Claims 20-31 are withdrawn in view of Applicant's amendments to the claims.

Examiner's Amendment

9. An Examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to Applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this Examiner's amendment was given in a telephone interview with Scott D. Sanford (Reg. No. 51,170) on April 23, 2009.

The application has been amended as follows:

AMENDMENTS TO THE SPECIFICATION

Please amend paragraph [0067] of the substitute specification (received on 02/11/2009) as follows:

[0067] In a further unique aspect, as described above, closures are handled in a different manner. Essentially, closure is a function which calls another function--a pair of a function and a variable binding environment within which the function is executed. The function code is present in the object file (O1). In one embodiment, the variable binding environment is computed at runtime. In ~~the~~ some contexts, such as where the runtime environment is designed for a presentation renderer such as a FLASH player, the content of the variable binding environment cannot be introspected and therefore cannot be serialized. This therefore puts it in a different category than functions, assets and objects. Functions and assets are represented in the object file, and ~~JavaScript~~ JAVASCRIPT objects are represented in the application state and can be introspected, and therefore both can be serialized. Closures are neither present in the object file nor can they be introspected.

AMENDMENTS TO THE CLAIMS

Please amend Claims 1, 3, 7, 11, 20, 21, 27, 28, 33, 38-41, 44, 45, 47, 52, 62, and 63 as follows:

1. (Currently Amended) A method for decreasing a computer application start-up time, comprising:

compiling application source code into a first object code file for a runtime environment, the first object code file including application objects, each marked with a unique identifier, and instructions defining relations between the application objects and built-in objects in the runtime environment;

processing the instructions to create relations between the application objects and built-in objects;

generating initialization code representing a first application state;

creating a serialized representation of the initialization code;

building an optimized object code file using the serialized representation and the first object code file, wherein the step of building includes:

identifying each application object in the serialized representation that has a unique identifier referring to an application object in the first object code file; and

for each identified application object in the serialized representation, copying the application object in the initialization code with the same unique identifier to the optimized object code file;

loading the optimized object code file into a new runtime environment to create a second application state isomorphic to the first application state; and

executing the optimized object code file in the new runtime environment.

3. (Currently Amended) The method of claim 1 wherein the step of creating a serialized representation includes enumerating a description of each application object of the computer application using reflection.

7. (Currently Amended) The method of claim 6 wherein the step of creating a serialized representation comprises detaching each application object from an application object hierarchy and creating a description of each slot in said application object.

11. (Currently Amended) The method of claim 1 wherein the step of creating a serialized representation comprises assigning a serialization identifier to each application object.

20. (Currently Amended) A method for providing an optimized application, comprising:
compiling an application provided in a source language to create a first object code file containing application objects for a runtime environment, each application object being marked with a unique identifier, and instructions defining relations between the application objects and built-in objects in the runtime environment;

initializing a first memory space that represents a first ~~program~~ application state that contains built-in objects of a the runtime environment;

processing instructions in the application objects in the first object code file in order to add application objects and create relations within the first memory space to create a second memory ~~state~~ space that represents a second application state;

executing portions of the application marked for execution to create a third memory ~~state~~
space that represents a third application state;

creating a serialized representation of the third application state; and

building an optimized object code file using the serialized representation and the first
object code file[[,]], wherein the step of building includes:

identifying each application object in the serialized representation that has a
unique identifier referring to an application object in the first object code file; and

for each identified application object in the serialized representation, copying the
application object in the third application state with the same unique identifier to the
optimized object code file;

loading the optimized object code file into a new runtime environment to create a fourth
application state isomorphic to the third application state; and

executing the optimized object code file in the new runtime environment.

21. (Currently Amended) The method of claim 20 wherein the step of creating comprises:
reading from the runtime environment a description of each application object of the
application.

27. (Currently Amended) The method of claim 20 wherein the step of creating includes
assigning a serialization identifier to each initialized application object.

28. (Currently Amended) The method of claim 20 wherein the step of creating includes the steps of enumerating each application object in a global scope and writing a serialized description of each said application object.

33. (Currently Amended) A method of operating an application, comprising:
requesting an application from an application source server;
compiling the application provided in a source language to create a first object code file containing application objects for a runtime environment, each application object being marked with a unique identifier, and instructions defining relations between the application objects and built-in objects in the runtime environment;

receiving ~~[[a]]~~ the first object code file loaded into ~~[[a]]~~ the runtime environment and creating a first application state;

executing portions of the application marked for execution and creating a second application state;

receiving an optimized object code file using a serialized description of the second application state and the first object code file, ~~the optimized object code file including instructions creating relations between objects in the runtime environment, wherein the~~ optimized object code file is built by~~[[.]]~~:

identifying each application object in the serialized representation that has a unique identifier referring to an application object in the first object code file; and

for each identified application object in the serialized representation, copying the application object in the second application state with the same unique identifier to the optimized object code file; ~~and~~
loading the optimized object code file into a new runtime environment to create a ~~second~~ third application state isomorphic to the ~~first~~ second application state; ~~and~~
executing the optimized object code file in the new runtime environment.

38. (Currently Amended) One or more processor readable storage devices having processor readable code embodied on said one or more processor readable storage devices, said processor readable code for programming one or more processors to perform a method for decreasing a computer application start-up time, ~~the computer application being compiled to create a first object code file loaded into a runtime environment and creating a first application state~~; comprising the steps of:

compiling the computer application provided in a source language to create a first object code file containing application objects for a runtime environment, each application object being marked with a unique identifier, and instructions defining relations between the application objects and built-in objects in the runtime environment;

receiving the first object code file loaded into the runtime environment and creating a first application state;

executing portions of the computer application marked for execution to create a second application state;

creating a serialized representation of the second application state;

building an optimized object code file using the serialized representation of the application objects and the first object code file, wherein the step of building includes: the optimized object code file includes application objects, each marked with a unique identifier, so that corresponding application objects in the first application state can be identified, and copying application objects from the second application state to the optimized object code file based on the unique identifiers; and

identifying each application object in the serialized representation that has a unique identifier referring to an application object in the first object code file; and
for each identified application object in the serialized representation, copying the application object in the second application state with the same unique identifier to the optimized object code file;

loading the optimized object code file into a new runtime environment to create a third application state isomorphic to the second application state; and
executing the optimized object code file in the new runtime environment.

39. (Currently Amended) One or more processor readable storage devices as described in claim 38 wherein the step of creating includes:

reading from a runtime environment memory space a description of each application object of a running application.

40. (Currently Amended) One or more processor readable storage devices as described in claim 38 wherein the step of creating includes enumerating a description of each application object of the computer application using reflection.

41. (Currently Amended) One or more processor readable storage devices as described in claim 38 wherein the step of creating comprises:

identifying each application object of a running application by a unique identifier.

44. (Currently Amended) One or more processor readable storage devices as described in claim 41 wherein the step of creating comprises detaching each application object from an application object hierarchy and creating a description of each slot in said application object.

45. (Currently Amended) One or more processor readable storage devices as described in claim 41 wherein the step of creating further includes the steps of:

determining whether the application object is a class; and

writing a serialized description of the class.

47. (Currently Amended) One or more processor readable storage devices as described in claim 39 wherein the step of creating comprises assigning a serialization identifier to each application object.

52. (Currently Amended) A method for reducing the start-up time of an application, comprising:

compiling the application provided in a source language into a first object code file for a first runtime environment, the first object code file including application objects, each marked with a unique identifier, and instructions defining relations between the application objects and built-in objects in the first runtime environment;

loading the first object code file into [[a]] the first runtime environment to create a first application state;

executing portions of the application marked for execution to create a second application state;

creating a serialized representation of the second application state;

building a second object code file using ~~said the~~ the serialized representation and the first object code file, wherein the step of building includes: application objects from the second application state are copied to the second object code file based on a unique identifier associated with each application object in the serialized representation; and

identifying each application object in the serialized representation that has a unique identifier referring to an application object in the first object code file; and

for each identified application object in the serialized representation, copying the application object from the second application state with the same unique identifier to the second object code file;

loading ~~said the~~ the second object code file into a second runtime environment to create a third application state isomorphic to the ~~first~~ second application state; and

executing the second object code file in the second runtime environment.

62. (Currently Amended) A method for delivering an application via a network, the application being compiled to create a first object code file loaded into a runtime environment and creating a first application state; the method comprising:

compiling the application provided in a source language to create a first object code file containing application objects for a runtime environment, each application object being marked with a unique identifier;

receiving the first object code file loaded into the runtime environment and creating a first application state;

creating relations between application objects in the [[in]] first object code file and built-in objects in the runtime environment to create a second application state;

executing portions of the application marked for execution to create a third application state;

creating a serialized representation of the third application state;

building an optimized object code file using the serialized representation and the first object code file, wherein the step of building includes: application objects are copied from the third application state into the optimized object code file based on a unique identifier associated with each application object in the serialized representation; and

identifying each application object in the serialized representation that has a unique identifier referring to an application object in the first object code file; and

for each identified application object in the serialized representation, copying the application object from the third application state with the same unique identifier to the optimized object code file;

loading the optimized object code file into a new runtime environment via the network to create a fourth application state isomorphic to the third application state; and
executing the optimized object code file in the new runtime environment.

63. (Currently Amended) The method of claim 62 wherein the step of creating includes enumerating a description of each application object of the application using reflection.

-- END OF AMENDMENT --

Reasons for Allowance

10. The following is an Examiner's statement of reasons for allowance:

The cited prior art taken alone or in combination fail to teach, in combination with the other claimed limitations, "identifying each application object in the serialized representation that has a unique identifier referring to an application object in the first object code file; and for each identified application object in the serialized representation, copying the application object in the initialization code with the same unique identifier to the optimized object code file" as recited in independent Claim 1; and further fail to teach, in combination with the other claimed limitations, similarly-worded limitations recited in independent Claims 20, 33, 38, 52, and 62.

The closest cited prior art, US 7,191,441 (hereinafter “Abbott”), teaches a system wherein the virtual machine and application can be stored in a suspended state for later resumption. However, Abbott fails to teach “identifying each application object in the serialized representation that has a unique identifier referring to an application object in the first object code file; and for each identified application object in the serialized representation, copying the application object in the initialization code with the same unique identifier to the optimized object code file” as recited in independent Claim 1; and further fails to teach similarly-worded limitations recited in independent Claims 20, 33, 38, 52, and 62.

Any comments considered necessary by Applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

Conclusion

11. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Qing Chen whose telephone number is 571-270-1071. The Examiner can normally be reached on Monday through Thursday from 7:30 AM to 4:00 PM. The Examiner can also be reached on alternate Fridays.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner’s supervisor, Wei Zhen, can be reached on 571-272-3708. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the TC 2100 Group receptionist whose telephone number is 571-272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Q. C./

Examiner, Art Unit 2191

/Wei Y Zhen/

Supervisory Patent Examiner, Art Unit 2191